

OLDEST BEE PAPER
IN AMERICA

THE AMERICAN BEE JOURNAL

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN
1861.

Chicago, Ill., March 19, 1884.

VOL. XX. No. 12.

THE WEEKLY EDITION



925 WEST MADISON ST., CHICAGO, ILL.
Weekly, \$2 a year; Monthly, \$1.

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THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ill.

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Letters for publication must be written on a separate piece of paper from items of business.

The Mahoning Valley bee-keepers will hold their next meeting in the Town Hall at Newton Falls, O., on Thursday, April 10, 1884, at 10 a. m. — E. W. TURNER, Sec. L. CARSON, Pres.



CLUBBING LIST FOR 1884.

We will supply the *American Bee Journal* one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both. Club
The Weekly Bee Journal,.....	\$2 00.
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Apiary Register for 200 colonies	3 50. 3 25
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Quinby's New Bee-Keeping.....	3 50. 3 25
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Alley's Queen Rearing.....	3 00. 2 75
Scribner's Lumber and Log Book....	2 25. 2 25
Fisher's Grain Tables.....	2 40. 2 25
Moore's Universal Assistant.....	4 50. 4 25
Honey as Food & Medicine, 100 Copies	4 50. 4 25
Blessed Bees.....	2 75. 2 50
King's Text Book.....	3 00. 2 75
The Weekly Bee Journal one year and and Gleanings in Bee-Culture (A.L. Root)	3 00. 2 75
Bee-Keepers' Magazine (A.J. King)	3 00. 2 75
Bee-Keepers' Guide (A.G. Hill).....	2 50. 2 25
Kansas Bee-Keeper.....	3 00. 2 75
The Apiculturist, (Silas M. Locke)	3 00. 2 75
New Eng. Apiarian, (W.W. Merrill)	3 75. 2 50
British Bee Journal.....	3 75. 3 50
The above-named papers.....	9 00. 7 75

The *Monthly Bee Journal* and any of the above, \$1 less than the figures in the last column.

The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

Advertisements.

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On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's National Bee-Keeping.—A translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon...has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, \$2.

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. Price, \$1.00.

Bee-keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, \$1.25; paper cover, \$1.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, 75c.; in paper covers, 50c., postpaid.

Honey, as Food and Medicine, by Thomas G. Newman. This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market. Honey as food, giving recipes for making Honey-Cake, Cookies, Puddings, Flours, Wines, etc.; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 5c.; per dozen, 50c.

Preparation of Honey for the Market, including the production and care of both combs and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc. by T. G. Newman. This is a chapter from "Bees and Honey." Price 10c.

Swarming, Dividing and Feeding Bees,—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, 5c.

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, 10c.

Bees in Winter, with instructions about Chaff-Packings, Collars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, 5c.

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Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price 25c. postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. 40 cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secreta, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronziers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, \$2.50.

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information. Price \$2.50. for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root. The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject. \$1.50.

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, 25c.

Novice's ABC of Bee-Culture, by A. I. Root. This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25.

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00.

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, \$3.

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, 75c.

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, 25c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. 15c.

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, 10c.

Dzierzon Theory i—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Apinary Register, for SYSTEMATIC WORK in the APIARY. The largest ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, \$1.00; for 100 colonies, \$1.25; for 200 colonies, \$1.50.

Deutsche Buecher,
ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieses Pamphlet enthält Belehrungen über folgende Gegenstände

—Dertlichkeit des Bienenstandes—Honig pflanzen—Erziehung der Königin

—Füttern—Schwärmen—Ableger—Verschenken—Italienisieren—Züchter von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueste Methode für die Herrichtung des Honigs für den Handel beschrieben ist. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman.

Dieses enthält eine klare Darstellung über Bienen und Honig des Alterthums; die Beschaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchlein, puddings, Schaumkonfekt, Weine, u.s.w. zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es ist für den Consumenten bestimmt, und sollte vielseitig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und seine Krankheiten—Von B. J. Kendall,

W. D., enthaltend ein alphabetisch geordnetes Verzeichniß der verschiedenen Pferdekrankheiten, sammt den Ursachen, Symptomen und der richtigen Behandlung derselben; ferner, eine Sammlung wertvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.

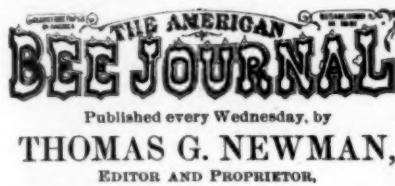
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., MARCH 19, 1884.



The Vice-Presidents of the National Convention.

A recent letter from a Canadian gentleman, who was at the Toronto Convention, throws some light on the subject of the vice-presidents of the North American Bee-Keepers' Convention. He says:

Toward the close of the convention, some one who managed to keep his mind on business a little during the general jollification, said that the vice-presidents ought to be elected. This was agreed to, and after some talk it was decided to re-elect all the old ones except where any objection was made. The next thing was to find out who the old ones were, which was solved by the Rev. W. F. Clarke pulling a small pamphlet out of his bag and handing it to the chairman. The list was read, and some changes were made, including appointments for Manitoba (Hon. Mr. Wallbridge), and some States not before represented. After it was all done, it was found that Mr. Clarke's list was not for 1882-83, but for a year or two before. However, it did not seem to make much difference—something had been done, and the gastermeter was rapidly filling, and the stream of talk was turned on again. As far as I can remember no record of the vice-presidents was taken, except by Mr. Bengough, the short-hand reporter to whom Mr. McPherson refers in his letter to the BEE JOURNAL of the 5th inst. That is the plain, unvarnished tale. It is to be hoped that Dr. Miller will be a more methodical secretary than his predecessor, who did not take a note during the proceedings.

It seems rather a queer thing that at such an important series of meetings no minutes were read or kept, but everything left in the hands of an outside party, and on account of some disagreement between him and his reporter that the bee world should be deprived of valuable information.

The following, from the Reporter who was censured for not furnishing the report, is due both to him and our readers :

EDITOR BEE JOURNAL:—A friend has shown me your issue of March 5, containing your article on the "Report of the National Society." I have, no doubt, that your readers would be interested in my story, after reading Mr. McPherson's reference to "warlike correspondence," "unbusiness-like conduct," etc. The following letter sent by me to Mr. Jones will, I think, make the whole matter clear. The Mr. Moore mentioned is the friend to whom Mr. Jones first spoke, and who in turn told me (on the morning of the first day's session, only a few minutes before it commenced), that Mr. Jones wanted a report of the convention.

"TORONTO, Oct. 16, 1883.

D. A. JONES, Esq., Beeton, Ont.—
Dear Sir: I regret very much that I was not in the office when you called on Saturday. Mr. Moore has shown me a letter to him in which it is stated that you could have got a reporter to report the convention for \$25. I have seen reason to regret that this reporter was not engaged, as I consider three days and two nights of my time are fully worth that amount, to say nothing of the time consumed in transcribing the notes.

"I spoke to Mr. McPherson at the convention when he attended—I believe the first evening—and thus gave him timely notice of the probable cost of the report. He spoke as though the matter was in your hands, and, therefore, when you brought the matter before the convention, I again mentioned to you that at newspaper rates the transcript would be worth over \$100. I afterwards spoke to Mr. Muth and yourself, hoping that an arrangement might be made, before the officers of the convention dispersed, by which the whole business would have been thoroughly understood and properly settled. Mr. Muth said that a few officers could make up the amount if necessary, and as there was to be a meeting in the honey house that evening, I felt satisfied to leave the matter in the hands of the committee.

"When the matter was mentioned to me at first, on the morning of the first day, by Mr. Moore, I supposed that Mr. McPherson was one of the officers of your association, as it was stated to me that he was willing to contribute \$25 towards the report of

the proceedings. I presumed that you intended to make arrangements with the committee by which Mr. McPherson's share of \$25 would be accepted as part, and the association would be asked for the balance. I, therefore, went on with the work, trusting you to make it all right. On the morning of the first day, when the Rev. Mr. Clarke asked me for whom I was reporting, I told him you had engaged me, and he said, "Mr. Jones is good for it." That is the way I felt, and this is why I did not make a definite arrangement at the start. I knew that the association would not allow any member to pay out of his own pocket for work done for them as a body. I trust that you will appreciate my proposition in this matter, in order to bring it to a conclusion. I am willing to forego the time already spent on it, and hereby offer without prejudice to furnish a report of the proceedings for \$75.

Yours truly,
THOS. BENGOUGH."

I submit that this letter answers all charges preferred against me. It shows: 1. That I never undertook to furnish a report for \$25. 2. That at a very early stage in the proceedings I told Mr. McPherson what the report would cost, and that later on, and while the matter was being discussed in convention, I informed Mr. Jones on the same point. 3. That I never refused to transcribe my short-hand notes, but, on the contrary, I offered as early as October to do the work for 25 per cent. less than the price mentioned. 4. That I spoke to the Treasurer of the National Society with a view to instructions. 5. That the convention deliberately decided to have the report published, and that I am not responsible for the failure, as I never received an official requisition for the transcript.

The report is actually much longer than I anticipated when I spoke to Mr. McPherson, and at newspaper rates would be worth at least \$150. While at tariff rates for convention work, it would be worth nearly \$200. I am willing, however, to take \$100, the amount calculated on, and will guarantee a first-class report. In order to avoid further "unbusiness-like conduct," I would suggest that a check be deposited by the Treasurer with some responsible person here, with instructions not to pay it until I have delivered the report into his hands. I will then proceed at once with the work, and will guarantee perfect satisfaction.

Allow me to add that I shall be surprised if, after reading the above, the officers and members of the National Society will be parties to a policy of repudiation that involves a breach of faith. The loss of my time and labor, though it occurred at a time of the year when I could least afford it, is nothing compared with the loss of the Society's honor which repudiation involves. My only fault has been over-confidence in those who seemed to me to speak as representing the Society. I think it is too bad that I should lose time and labor, and the Society should lose its reputation and its report, simply because "some one has blundered."

How does the matter strike you now, Mr. Editor?

THOS. BENGOUGH.

It "strikes" us as being a very unbusiness-like affair on all sides. If the convention desired a stenographic report, it should have appointed a committee clothed with full powers to procure it. On the other hand, the Reporter should have made an agreement for some definite sum, either by the folio or the job. As none of these things were done, bee-keepers in general are not to blame. The Society took no steps to procure the Report, and are not responsible for the representations of those who were not even its members.

Of course a "blunder" has been made—or, rather, many of them, by the lack of a business-way of procedure. The Society voted that its proceedings should be published in pamphlet form, but appointed no one to do it; and while it has the "funds" to procure it, no steps were taken to do so—hence there can be no just charge of *repudiation*.

If President Jones had ordered it for the Society, he would have taken and paid for it out of the Society's funds, at the proper time; but now it is *too late* to be of value to any one.

It is an unfortunate affair; and we would suggest a compromise—pay for the "notes" already taken, and let the matter drop—the copying is the costly part—let that remain undone. We paid for the report published in the *BEE JOURNAL*, and no charge of repudiation can be made against us—let that be considered the official report—and—"let us have peace."

Having given both sides a chance to present their version of it, we cannot spare room in the *BEE JOURNAL* for arguing, so now let the matter drop.

We have received a pamphlet giving the report of the Hants and Isle of Wight Society, in England.

We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will probably be 50 cents.

The Dutch papers mention the discovery of a "certain cure" for gout. A peasant who was confined to his bed by a sharp attack was stung by a bee, and almost immediately he felt better, and next day he was well. A short time after another patient thought he would try the same remedy, and, having induced a bee to sting him on the part affected, he also was cured.

THE HYGIEAN HOME COOK BOOK; or Healthful and Palatable Food without Condiments. Fifth edition. Price, paper 25 cents, cloth 50 cents. Fowler & Wells, Publishers, 753 Broadway, New York.

A new edition of this manual of healthful cookery is on our desk. It is not a work on the philosophy of food, but one giving recipes for its healthful and palatable preparation.

The Glucose Factories seem to be in trouble everywhere. The Toronto, Ont., factory was recently sold because the "share-holders had lost \$135,000, which they had invested in it." It is not being operated now, and the purchasers are losing \$20 per diem, on their investment. For this reason they have petitioned the City Council for exemption from taxation. Would it not be more honorable, as well as more profitable for them, to turn the factory to some legitimate and beneficial use?

Local Convention Directory.

1884.	Time and place of Meeting.
March 20.—Southern Indiana, at Madison, Ind.	H. C. White, Sec.
Mar. 29.—Union Association, at Dexter, Iowa.	M. E. Darby, Sec., Dexter, Iowa.
April 9.—Ass'n of Central Ills., at Bloomington.	W. B. Lawrence, Sec.
April 9.—Lorain Co., at Elvria, O.	O. J. Terrell Sec., North Ridgeville, O.
April 10.—Mahoning Valley, at Newton Falls, O.	E. W. Turner, Sec.
April 18.—Iowa Central, at Winterset, Iowa.	J. E. Pryor, Sec.
April 22.—Des Moines Co., at Middleton, Iowa.	John Nau, Sec.
April 24.—Western Michigan, at Berlin.	F. S. Covey, Sec.
April 24, 25.—Western, at Independence, Mo.	C. M. Crandall, Sec.
April 24, 25.—Texas State, at McKinney.	W. R. Howard, Sec.
May 3.—Progressive, at Bedford, O.	J. R. Reed, Sec.
May 6.—Southern Wisconsin, at Janesville.	J. T. Pomeroy, Sec.
May 26.—Will County, at Monroe, Ill.	P. P. Nelson, Sec.
Oct. 11, 12.—Northern Mich., at Alma, Mich.	F. A. Palmer, Sec., McBride, Mich.
Oct. 15, 16.—Northwestern, at Chicago, Ill.	W. Z. Hutchinson, Sec.
Dec. 10, 11.—Michigan State, at Lansing.	H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

W. J. Ellison, Stateburg, S. C.—1 page—Italian Bees and Queens.
F. H. Chamberlin, Dexter, Iowa,—6 pages—Given Comb Foundation.
John T. Smith, Bellevue, Mich.—1 page—Comb Honey Rack.
Rev. Wm. Ballantine, Sago, O.—1 page—Queens and a New Bee Book.
Thos. Gorsuch, Gorsuch, Pa.—1 page—Acme Honey Case.
H. H. Flick, Lavansville, Pa.—1 page—Apiarist and Fine Stock Breeder.
Z. K. Jewett, Sparta, Wis.—4 pages—Evergreen and Deciduous Tree Seedlings, Small Fruits, etc.
Geo. Neighbour & Sons, 149 Regent Street, London, England—8 pages—Second-hand Bee Books.

James M. Hyne, Stewartsville, Ind.—8 pages—Bee-Keepers' Supplies, Bees, Queens and Honey.

Paul L. Viallon, Bayou Goula, La.—8 pages—Apiarian Implements and Italian Bees and Queens.

Howard U. Ackerman, North Indianapolis, Ind.—2 pages—Poultry.

Reynolds Brothers, Williamsburg, Ind.—10 pages—Bee-Keepers' Supplies, Bees, Queens, etc.

The Caledonian Apiarian Society's eleventh grand show of honey, hives and bees, will be held at Edinburgh, Scotland, in connection with the Highland and Agricultural Society's Show, on the 22, 23, 24, and 25 of July, 1884.



For the American Bee Journal.

How Far will Bees Go for Honey?

G. M. DOOLITTLE.

On page 36 I notice an extract from Mr. Pettigrew's "Handy Book of Bees," in which the claim is made that "bees will perish and die for want of food within three miles of good pasture." Mr. P. farther states as his opinion "that very few bees go more than two miles for food."

As this is a matter of interest to all, I will give some facts which have come under my observation, going to prove that Mr. P. is incorrect in his conclusions as applied to the United States, however the case may be, regarding the flight of bees in the Old World.

If bees only went two miles in search of food it would take but a limited conception to see that a very few colonies of bees would overstock many localities where now large apiaries are kept. This matter of overstocking my location with bees used to worry me quite a little when I had from 20 to 40 colonies of bees, but when I became convinced that bees went from 3 to 4 miles from choice for honey, I ceased to worry about it, and I find that at the present time bees do as well as ever with over 300 colonies within a distance of a mile of me.

When I had been keeping bees about two years, and had some 18 to 20 colonies of black bees, I chanced to go into the orchard near by to watch the bees at work on the apple blossoms. The spring before this, Italian bees had been introduced into a town adjoining ours, and were increased to some 30 colonies, the increase being made wholly by division, so there could have been no stray swarms of Italian bees in the woods. These bees were fully three miles from me in a straight line, and as I then believed the same as does Mr. Pettigrew, you can imagine my surprise when almost the first bee I saw proved to be an Italian. Upon examination I found that on an average one bee in five was Italian, which were at work on the apple bloom, and this with apple blossoms in profusion every where.

Still later, this same season, I was cutting a field of clover one mile from home, or four miles from these same Italians, when I saw bees at work on the clover. As I had read, previous to this, much about Italian bees working on red clover, I stopped the horse, got off the machine, and to my surprise counted five Italians to two blacks, and this with fields red with clover every where. I was now convinced that there was little need of fearing that I would not be able to keep 100 colonies without overstocking my pasturage, as that was the number I then desired to attain. But so far I had only proved that bees would go

at least four miles from home to work, but could not say whether they could work to advantage that distance or not. In the latter part of August, 1874, I ascertained that the bees were getting honey from buckwheat, by the odor which greeted me from the bee yard on damp evenings. As there was not a field of buckwheat in sight of the apiary, I was curious to know where the honey came from. At two miles from home I found a small field of about three acres, and a mile further on was another field of about the same size, while at a distance of about five miles there was from 30 to 50 acres all in full bloom. The result of the buckwheat season showed that from about 60 colonies I sold 900 pounds of buckwheat comb honey, and the bees had at least 1,500 pounds of the same kind to winter on, as the hives were nearly destitute of honey before, and at the end of buckwheat they had a great abundance.

Again, the nearest teasel fields are from $2\frac{1}{2}$ to 3 miles from my apiary, while they extend from there on ten or more miles. A bee which works on teasel gets her abdomen covered with a whitish dust, so that she is as readily distinguished as is one which works on pumpkin or squash blossoms. As teasel commences to bloom at about the same time the basswood does, the bees must leave the basswood to work on the teasel, which thing they do, for where both are secreting honey, I find about half of the bees going into each hive covered with teasel dust, and at times when basswood yields but little, nearly all the bees will be thus dusted. Besides this reason for believing that the bees work on teasel as above, I have another: I attend church $2\frac{1}{2}$ miles from home, in the direction of these teasel fields, and when the teasel is in bloom I have seen them by the score pass the church, going to and from the fields when the wind was unfavorable.

Once more: Seven miles to the southeast is a hill which is the highest point in our country, it being nearly 800 feet higher than my apiary. After a distance of one mile, there is a gradual rise until the top of the hill is reached. There are from 10 days to 2 weeks difference in time of the basswood bloom between that at the top of this hill and the same near my apiary. The past season, the bees labored to just as good advantage, as far as I could see, for 7 days after the basswood bloom was all gone 3 miles distant, as they did when it was in blossom nearer the apiary.

In this, my experience is different from the author of Quinby's New Bee-Keeping (L. C. Root), who says: "During the large yield from basswood in 1874, as the blossoms failed in the valley, the bees continued bringing in the same quality of honey, following the basswood day by day as it opened on the hills, until the first week in August, when they still came in heavily loaded, but very tired from a long flight. I drove to the heights, 6 miles distant, and found the basswood was there just coming into bloom. I immediately moved 48 colo-

nies to this location, and in the following week these 48 colonies gave me one ton of surplus honey, while the 71 colonies left at home did not secure one-half that amount, yet they continued working upon the same ground during the entire period."

However, there is one thing Mr. Root failed to note, which is, that if a continuous good yield is to be secured, it is necessary to have continued good weather, for if 2 or 3 days of rainy weather should occur when the bloom had receded 4 or 5 miles (thus allowing the bloom to fail for a distance of a mile or so beyond where the bees had gathered honey), they will never go to the hill-top, be the honey ever so plenty there.

The solution seems to be that after the rain they go to the trees where they last procured honey, and finding none, nor any near by, conclude that the harvest is over without going over the strip where the honey has failed to that which is beyond. In the above I believe I have given good proof that bees do labor to advantage from 4 to 7 miles from home. If any are still skeptical let them turn to page 181 of *Gleanings* for the year 1882, where they will find an article from the pen of H. A. Marsh, which will convince all. Borodino, N. Y.

For the American Bee Journal.

Peculiarity of Laying Workers.

R. M. OSBORN.

On June 1, 1883, I prepared 5 three-frame nuclei with bees and brood; and No. 2, in a few days, had laying workers, and for 27 days they would not take care of a queen-cell, and I put a virgin queen into this hive, and they drove her out in two days, and at the end of 27 days I believe they had 1,000 laying workers, so at night I killed them with sulphur, and cleaned out the hive and refilled it with bees and brood; the other 4 nuclei were full of bees for four months. I kept replenishing them from other hives, and they were queenless all the four months except while their queens mated. I did not let them stay in after about 10 to 100 eggs were laid. I grafted in queen-cells as soon as the queens were taken out. These four nuclei have never had a laying worker yet; they are yet on the summer stands.

Colony No. 14 (pure Syrian) had 7 combs all solid with capped brood on May 1, 1883. About May 10 all was hatched, and the combs were all filled with eggs in a few days, and some cells had 6 to 8 eggs in each, and when all was capped, it was a curiosity; the 7 combs were all worker cells containing about 20,000, and about 12,000 of them were drones; the workers were all regularly capped, and the drones were regularly at intervals all over those combs.

About June 24, at 2 p. m., I was alarmed, and I rushed to the scene of action, and it was a sight to see about 12,000 degraded drones swarming from this hive, and worker bees guarding the entrance, refusing the drones to

return; I closed the entrance, and the drones that clustered on the hive, I killed that night. In the morning I found all the rest of the drones clustered inside of the hive, near the entrance, and I killed them all. I had no queens to mate, and in a short time they had the combs all filled in the same style as before, and when capped I shaved all the two-story cells down level with the capped worker cells, and the laying workers were quiet.

No. 32 (pure Italian) was infested in the same manner, and about the same length of time.

No. 30 (pure Italian) was queenless from May until September. I kept them replenished from other hives, and never had any laying workers.

No. 48 (Syrian-Italian) was queenless three months, and replenished from other hives, and never had a laying worker.

No. 29 (pure Syrian) was queenless, and had no laying workers.

I found drone cells in several other hives through the season, all through the worker brood, and I removed the queens to learn the cause, and afterwards returned the old queens. I found more of those laying workers in June and July. Those drones do not make long trips from the hive; they are lazy; and the bees do not let them live long. The Syrian-Italian bees are my favorites.

Kane, Ill.

Middlesex, Ont., Convention.

A meeting of prominent bee-keepers was held at Ailsa Craig last week, for the purpose of forming an association to advance their mutual interests, and discuss matters appertaining to the keeping of bees. An organization was effected with the following officers: President, Mr. Campbell, of Parkhill; Vice-President, Mr. Atkinson, of Ailsa Craig; Secretary, Mr. Stewart, of Ailsa Craig. A profitable and interesting discussion followed, on "Bees and their Habits and Improvement," after which a deputation consisting of Messrs. Aikes, Campbell and Atkinson, was appointed to interview the directors of the Western Fair, with a view of securing better accommodation and inducements for bee-keepers wishing to make exhibits. The next meeting will be held in London, Ont.

For the American Bee Journal.

Spring Dwindling.

J. E. POND, JR.

March is the month of terror to bee-keepers. Few colonies die during winter if any care at all is used in fall preparation, but spring dwindling, which does not affect the colony till the severity of winter is over, decimates more apiaries than all other causes combined. What is spring dwindling, and how can it be prevented?

These are serious questions, and as yet no positively correct answer has

been given. The matter is largely one of theory, and possibly a solution may never be found, still in matters of true theory it does well to agitate, for by agitation only can we arrive at truth; that is, if no agitation is made, and no discussion had, the matter may be allowed to slumber into forgetfulness never to be awakened. Spring dwindling is characterized by diarrhoea, misnamed dysentery; find the cause and you prevent the disease; discover a remedy and you can cure it.

There is a remedy, but the great trouble is, it cannot be applied. Cleansing flights will cure this diarrhoea, for it is not a disease, but only an overloaded state of the bowel; and this overloaded state is found at just the time when the bees cannot safely fly, else there would have been no such condition. It being impossible then to apply a remedy, we must bend our energies to seeking out the cause, for that is the only course now left us. As many causes almost as there are bees in a colony, have already been given us, none of which, however, have proven to be correct; and in my opinion their authors had little faith in their correctness, when they presented them. The trouble is, there are many causes; or a combination of causes is needed to produce it. The bee in its normal state can exist for many months without the need of a cleansing flight; and during that confinement can partake of both honey and pollen without producing any disturbance of the bowel, all effete matters being carried off therefrom in a dry state. If this is so, and I defy proof to the contrary, we must then look for some poisonous condition of the food, as the cause of this acute inflammation which causes diarrhoea; for acute inflammation there must be, to change the contents of the bowel from a dry to a watery state. Now, what is it?

I propose to answer the question at the risk of calling down heaps of scorn and derision, from those who have already spelled, but have not got to the head. Unsealed honey may be, and at times is a cause of this complaint. Confine a colony on a warm day, and when you let them out, do they not show symptoms of diarrhoea? And if the confinement lasts for several days, they are very largely affected by it.

Again, sealed honey may contain enough moisture to cause it to ferment. Does any one deny this? If so they can easily verify it. But the real cause is, no doubt, lack of proper ventilation. This will cause moisture in excess; the bees in their endeavor to get rid of the moisture, are forced to partake of food; this food has become soured, and ferments, and the consequence is, that the bowels are inflamed.

Now if a warm pleasant day follows immediately, no trouble ensues, but if it continues cold for a number of days, food must still be partaken of, and the bowel constantly becomes more and more distended, till at last poor bee nature can stand it no longer, and must discharge its offensive contents in the hive or die, and if relief by rea-

son of warm weather does not come soon, the whole colony succumbs and dies.

The above is my answer in brief, and I shall stand by it till some one gives a better one. If I am correct, the remedy is easy to ascertain, but, perhaps, difficult to apply. It consists in so ventilating the hive that a perfectly natural condition of things is constantly kept up during the whole term of freezing weather. How this state can be brought about, I leave for others to determine. I have my own ideas on the subject, and at some future time may be tempted to make them known. For the present I am content if I have started up a little spark, which may, in the near future, form a big blaze.

Foxboro, Mass.

For the American Bee Journal.

Cyprian and Holy Land Bees.

D. D. DANIHER.

I have had both kinds for 3 or 4 years, and would like to give my opinion of them. I obtained Cyprians for two breeders to see if they would be alike. Their manner was alike, but one was dark in color and the other light. I think the dark ones the hardiest, the best honey gatherers, and they do not rob as much as the others. I have 8 or 10 colonies of them, and am not sick of them. If Mr. Doolittle wants to get rid of his, I will take them, for I think they will just suit me.

I have two Holy Land queens; they are very dark, and so are the bees, but they are good workers, always strong in numbers and stores. They are always ready for defense. You can leave home for a month and leave the honey board off, and they will take care of themselves.

I have 28 colonies of bees buried; they are mostly in deep frame hives, but some are in straw hives, logs, and box hives. Two are on the summer stands, and all are wintering first rate.

Madison, Wis., March 5, 1884.

For the American Bee Journal.

An Important Point in Wintering.

ALLEN PRINGLE.

In a late issue of the *Canadian Farmer*, a correspondent, in giving his aparian report, tells us how he put 25 colonies into a cellar "built expressly for the purpose" in the fall of 1882, and when he came to take them out in the spring, they were "one mass of mold." He says they did not appear to have sufficient ventilation; that the entrances were completely choked up; and between dysentery and mold were a terrible mess. After the spring dwindling was over, he found himself with only 4 colonies.

Now, this case furnishes a good text. It affords an excellent opportunity to point out a radical defect in the construction of hives; a defect

I have not unfrequently noticed even in the hives of leading apiarists and supply men.

In every hive, no matter what the style, there ought to be a ventilating hole in the back part 2 or 3 inches above the bottom-board. This should be covered with strong wire gauze inside, and a good button outside, so that it can be opened and shut at pleasure. In hot weather it can be left open, and then serves as a good ventilator. In the spring and fall, when a leading object is to keep the bees warm, and there is a sufficient ingress of fresh air at the entrance, this hole can be filled with wool from the outside, the button closed, and the cold thus kept out.

But it is in wintering that this arrangement is imperatively needed and becomes especially important. Indeed, I regard it as quite indispensable whether the bees are wintered outside or in. When wintered in a cellar or in a bee house the button can be left open; and then, no matter how many dead bees may be deposited on the bottom-board, choking up the entrance, the air can still enter at this hole.

And it is of equal value and importance in wintering outside. Lately I have noticed in more than one of the bee papers correspondents anxiously inquiring about the safety of colonies covered up in the snow drifts. And well they may, if they have not looked after this matter. A strong colony of bees under a snow bank, with other winter protection, will generate so much heat that even though the entrance may have been left wide open, the snow surrounding it will be melted from time to time until the entrance becomes completely closed with a thick glade of ice. Then if there is no other medium of air ingress, good-bye to the bees in a majority of cases. Still, there is probably this exception: In the case of a double-walled hive filled in with sawdust, and "ship-lapped" like the Jones double-walled hive, I am inclined to think that bees would not smother even though all the entrances were closed, that is, if the hive had not been so long occupied as to be hermetically sealed up inside the walls with wax. But these hives are not yet in general use, and even though they were, it would hardly be safe to depend upon the collateral ventilation through the walls of the hive under a snow drift. But it is quite impossible for the ventilating hole described above to become filled with ice; and it will serve to ventilate when the entrance gets either clogged up with bees or frozen up with ice.

This winter I am wintering 8 of the stronger colonies outside on the summer stands. Some 2 or 3 weeks ago, soon after the first heavy snow storm, I went to examine them, as some of them were quite covered up with snow. As I had stuffed the back ventilating holes with wool in the fall, and closed the buttons, I thought they might need some attention. I have three or four styles of hives in my apiary—the Jones hive, double and single-walled; the Thomas hive

improved; and a hive I make, which is quite different from both, and for which I have no name, and holding 14 frames below and 14 above, which I use mostly for extracted honey. I have also one Langstroth hive—a hive which has good features, but I do not like the frames for extracting. The bees I have wintering outside are in two double-walled Jones hives; two single-walled ditto; three Thomas improved; and one of my own non-descripts, making eight.

They are all, of course, provided with the back hole ventilator, for I always try to practice what I preach. One of the double-walled hives which I had not made myself, was without the hole, but I put it in during the fall while the bees were in the hive. Of course the double-walled hives, filled in, require a tube in the hole to keep the sawdust or other filling from running out. In this last hive mentioned, the bees were crowded up in the fall on about six frames; and behind the division-board was packed with dry forest leaves with some dry pine sawdust on top of them. (The frames in the Jones hive run parallel with the entrance instead of at right angles with it as is the case with most styles of hives.) Above all this was spread the cloth and then the heavy quilt packed with sawdust. As already stated, the hole behind in all the hives was filled with wool and the buttons closed in the fall. Upon examining the entrances after the snow storm, I found some of them completely stopped up with ice. The bees, however, were all right, as the hives clogged were the double-walled ones, besides they had been but a very short time in that condition. I opened the buttons behind, took out the wool, placed a piece of woolen cloth, three or four double, over each hole and filled in again with snow, and covered them up as they were, leaving the front entrances alone. Two or three heavy snow storms since have covered them up still deeper; but I am content to risk them though ten feet of the "beautiful" should rise above them. Indeed, I would rather have the snow on them than not, especially when the mercury is dancing around below zero most of the time.

Such a winter as this, so far, they are better under the snow than over it, and when it drifts off them, I shovel it on again. Had I known that this winter was going to be so terribly severe as it has been so far here, I doubt whether eight of my colonies would have been left out to winter. Of course they are "protected," but when the mercury persists in remaining below zero for days at a time, no ordinary winter protection will keep frost out of the hives. The truth is, we are all disappointed in the winter. The weather prophets—Vennor, Oats, et al.—predicted a mild, open winter; and as last winter was so exceptionally severe, we, too, thought it would not likely be immediately succeeded by a similar one. But the "weather clerk" has sold us again, and our out-door bees must, I suppose, take their chances.

In addition to the ventilating hole already described, there ought also to

be one in every hive in the front about the same distance above the lower entrance, or perhaps a little higher. As this is to serve sometimes as an entrance, the wire gauze must of course be omitted; but there must be a well-fitted button to cover it when not wanted open. This front avenue has more than one use, the principal one of which is to serve as an exit in winter and spring flights, when the bottom entrance is closed either with ice or dead bees, and before the hive is overhauled in the spring. At other times it can be kept shut if desired, except in hot weather when it can be left open for ventilation.

Selby, Ont., Jan. 24, 1884.

For the American Bee Journal.

Southern Wisconsin Convention.

The bee-keepers met in Janesville, Wis., on March 4, and organized a permanent society, to be known as the "Southern Wisconsin Bee-Keepers' Association." The following named persons were elected officers for the ensuing year: President, C. O. Shannon; Vice-President, Levi Fatzinger; Secretary, J. T. Pomeroy; Treasurer, W. S. Squire.

The regular sessions of the association will be held on the first Tuesday of March in each year. Special meetings will also be held, the time and place of which will be determined at previous meeting.

The object of the association is to promote scientific bee-culture and form a bond of union among bee-keepers. Any person may become a member by signing the constitution and paying a fee of 50 cents. The next meeting will be held at the Pember House in Janesville, on the first Tuesday in May, at 10 a.m. All bee-keepers are cordially invited to attend. The secretary, J. T. Pomeroy, of Edgerton, Rock County, Wis., will conduct the correspondence of the association. J. T. POMEROY, Sec.

For the American Bee Journal.

Bees Eating Grapes.

HENRY ZEIS.

The following item is from the *Gardner's Monthly*, and I saw it in the *National Farmer*. As I wish to give my experience, I will quote the item here:

"It has been clearly demonstrated by Australian experience, that the honey bee can open flowers from outside as well as the humble bee in this country. We have never had any doubt ourselves that they do manage to cut open grapes somehow, and eat them; but as good entomologists declare that their tongues are not equal to the task, it was not wise to argue the point too strongly. But now that it has been clearly proved that they can cut open flowers to get the honey easy, there is no reason why they cannot cut open grape skin also. We now regard the question settled. Bees do cut into and eat grapes, and to that

extent are an injury to the fruit grower."

I have two acres of vines, of different kinds, close by my apiary of over 50 colonies, but I never saw a grape punctured yet by a bee, though I laid grapes in front of the hives. I know that they will not touch a sound grape, but if wasps injure them first, the bees will suck up the juice.

Pacific, Mo.

For the American Bee Journal
Convention at Davenport, Iowa.

The second annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association was held at Moore's Hall, Davenport, Iowa, beginning Feb. 21 and lasting three days. President I. V. McCagg called the meeting to order at 2 p. m. Secretary J. J. Nagle being absent, Wm. Goos was appointed secretary *pro tem*. The roll being called, most of the members were found to be present.

The minutes of the last meeting were read and approved. A motion to have a committee prepare a programme so that it could be published in the daily papers, was carried. The committee was as follows: C. H. Dibbern, J. V. Caldwell, and J. B. Lindley.

The Treasurer's report was read and approved.

A letter of invitation from the Academy of Sciences of Davenport, was read by the secretary, and accepted.

The report of the committee on Programme was made and adopted.

A motion to hold evening sessions was lost.

The following were elected officers for the ensuing year: I. V. McCagg, President; Geo. L. Gast, Vice-President; Wm. Goos, Secretary; Israel Hall, Treasurer; all of Davenport. An executive committee was appointed as follows: J. V. Caldwell, of Cambridge, Ill.; J. B. Lindley, of Muscatine, Iowa; and C. H. Dibbern, of Milan, Ill.

After receiving the reports of members, the convention adjourned to 10 a. m., Friday.

President McCagg called the meeting to order at 10 o'clock, there being a much larger attendance than on the first day.

According to programme, Mr. T. G. Newman then gave an address on "Marketing Honey." He spoke of the importance of the subject, and then of the antiquity of the business. More than 2,500 years ago is the first record we have of commerce in honey, in Tyre, and since then it had been marketed in various ways until we have the excellent methods of to-day. The product of the world is estimated at about \$25,000,000, and of this 100,000,000 pounds is produced in America. A mistake made in the marketing of honey that reduces the price one cent per pound for the crop, would lose \$1,000,000 for the producers, and to add one cent per pound would put that amount in the pockets of the producers. Comb honey, being a fancy article, we must so manage it, as to

get a fancy price. We should make it attractive, assort and label, keeping each kind separately. Small crates sell the quickest, and are of the most advantage. Extracted honey should be ripened and placed upon the retail market in small packages, such as cans, jelly cups, kegs, etc., and being good for years, it has an advantage over comb honey. Candied honey could be carried in paper boxes. The candying is a proof of purity, and all honey should be labeled with the keeper's name and address; and that name should always be a synonym for purity, so that when a person purchases this honey he may feel sure it is absolutely pure, and in that way the producer could build up a local market that would last for years and increase constantly. He closed by advocating large exhibits of honey at all the fairs, in order to educate the people to the importance of the product, and to induce them to use honey both for food and medicine, and thus increase the demand.

Mr. Briggs, of Wilton, spoke on the subject of freights, and said he could get better rates by express than by freight.

The Rev. O. Clute heartily endorsed the ideas of Mr. Newman, and dwelt particularly upon the advantages and necessity of building up a home market—but then stated that more money could be made by keeping more bees, and producing more honey, and shipping it off to the great central markets than by fussing with the little home markets. Mr. Clute recommended large packages—600 pound barrels; it can be more easily handled as freight, and the merchants prefer it, as more economical in room in the store houses; besides, it sells more readily to the large purchasers for manufacturing purposes. Packages which hold 175 to 200 pounds may do for purchasers of small quantities, but 600 pound packages are the most profitable.

A very large part of the honey crop is now taken in the form of extracted honey. Comb honey is good and beautiful, but it has the disadvantage of the wax, which is indigestible, and which nobody cares to eat. In the extracted honey we have no wax, it is honey in its purest form. Many people associate extracted honey with strained honey; they suppose that all honey out of the comb is strained honey, but this is great injustice to extracted honey. In getting strained honey all the combs from a hive, combs containing capped brood, and growing larvae and pollen and honey, are mixed up together and then the liquid squeezed out. In this way there is obtained some honey, but there is also obtained the juice of the growing larvae of the young bees, and of the pollen, so that the honey has a rank flavor, a dark color, and associations by no means appetizing. But extracted honey is as different from this strained honey as it is possible to be. In getting extracted honey, we get no pollen, no juices of bees or larvae. We get simply the pure honey, without any admixture whatever.

He, who on a cold winter morning has

never had pure, candied, white clover honey to spread on his hot cakes, has lived in vain! Life has lacked for him one of its chiefest charms! He said that he never understood the full meaning of the scripture description of "the land flowing with milk and honey" until he went into the honey business. Take a dish of pure extracted honey, and pour cream from your Jersey or Ayrshire cow over it, and you have a dish fit for any god or goddess that ever dwelt upon Olympus.

Mr. Joshua Wadsworth, of Moline, Ill., said that talking about 600 pound packages for shipment was all well enough, but he did not believe that many there raised enough honey to fill even two packages of that kind in a year. What is wanted is information as to the best method of disposing of honey in local markets. He spoke of the importance of neat packages, avoidance of overstocking the market, etc., and other matters of interest to the bee-keeper.

A recess for 15 minutes was taken, when new members were received, and the membership fees collected.

The executive committee reported that they did not think it advisable to hold more than one annual meeting, and recommended that the annual picnic be held on Blackhawk's Watch Tower, four miles south of Rock Island, on the second Tuesday in August. That the Secretary be instructed to notify the members at least two weeks previous to the holding of the picnic. They also recommended that the portion of the President's address relating to the members being sociable with each other, be adopted. That the invitation of Mr. O. Clute, of Iowa City, to visit his apiary, be accepted. The time to be set by Mr. Clute sometime during May. Also that the invitation of Mr. E. L. Briggs, to visit his apiary at Wilton sometime in September, be accepted; the time to be arranged by Mr. Briggs.

It was voted to refer this back to the committee to fix the dates for the picnics.

Mr. J. V. Caldwell, of Cambridge, Ill., spoke of the difference in flavor of extracted honey and comb honey. People, as a rule, liked comb honey the best. It was more tasty.

Mr. Newman said that the difference in the pleasure experienced in eating comb and extracted honey, was probably explainable thus: In eating extracted honey, a spoonfull was taken into the mouth on the tongue, back of the tip, and was swallowed without obtaining the full richness of taste, while the comb honey was taken by the teeth, and the tip of the tongue received the full flavor and deliciousness of the honey, permeating the organs of taste, and giving the whole system a feeling of ecstasy that would fill even a mythical god with delight.

Adjourned till 2 p. m.

The afternoon session was called to order by Pres. McCagg at 2 p. m., when the bee and honey reports were taken of those who were not present in the morning.

The Rev. E. L. Briggs gave an address on the different varieties of bees. After describing the large bees of Java, the little stingless bees of South America, the native black and brown bees of North America, the Carniolan, Egyptian, Italian, Cyprian, and Syrian bees, he said that he preferred the pure Italians, which were both prolific and hardy.

The Rev. O. Clute described his method of wintering bees, and said: I am careful to see that they have honey enough in the fall; as a rule, 25 lbs. is a large amount. Keep the bees strong in the fall, but it is better for them not to have any brood when you move them into the cellar, for all the young bees ought to have a fly before putting them into the cellar. I give no upward ventilation. I have shallow trays made that fit over the hive; the bottoms of the hives are covered with muslin, and the trays are filled with sawdust. They are wintering very good; better than usual. I carry them into the cellar after cold weather has set in, but not too early in the season. I then pile them from 3 to 4 feet high, and put the lower row some distance from the bottom of the cellar. The chimney goes to the bottom of my cellar, and the draught carries off all the foul air. In my cellar the ground is dry—the windows are covered to make it dark; but I have them so I can open them, if I want to. I have a stove in the cellar to keep the temperature between 40° and 45°; they do not eat as much honey at that temperature as they would in a higher one.

Mr. Mead asked if there was any objection to putting the bees in a cellar where there are vegetables?

Mr. Clute said if the vegetables are not decayed it will make no difference. I leave the button open when I put them into the cellar.

Mr. T. G. Newman being called on to give his views concerning the best bees, said that the Italians no doubt possessed many of the most valuable traits of character. What we need is to "breed up," all the time keeping our eye upon the characteristics of "our ideal bee." To obtain the best results, we must possess the highest grade of bees that it is possible to obtain. Our object being to elevate the race, no deterioration should be countenanced, and the most thorough and rigid treatment must be employed, all looking to the building-up of a strain of bees that will give the best results.

The queen must be prolific to be able to keep the hive full of bees, to gather the honey harvest when it comes; the bees must be industrious to let nothing escape their vigorous search while gathering the sweet nectar; they must be docile to allow the apiarist to manipulate them with ease and pleasure; they must be strong and hardy, to withstand the rapid changes in climate; and must be of singular beauty, to attract the admiration of the fancier of fine stock.

"The bee of the future" will be present at the very moment when the slumbering flower, under the penetrating dew, awakes to consciousness, and unfolds its buds to take in the

first rays of the morning sun. The ideal bee will dip into that tiny fountain, which distills the honey drop by drop, and bear off its honeyed treasure to its cells of virgin comb.

In developing the highest strain of horses, not all their offspring are equal to the best; careful selection of those coming the nearest to the ideal animal must always be chosen, from which to breed, and the closest scrutiny is necessary while making that selection. The same is true of cattle, sheep, hogs, poultry and bees. "Sports" and "variations" continually occur, producing inferior progeny; but all careful breeders who have an eye to the improvement of the race, will reject those that do not come up to the "standard of excellence," sending such animals and poultry to the shambles—so let us carefully select the best queens and drones to breed from, and remorselessly sacrifice all others.

Rev. O. Clute spoke of the effort being made to get a good exhibit at the State Fair and suitable premiums for honey exhibits. The present premiums offered amount to about \$175, obtained largely through his efforts, and he had strong hopes of succeeding in obtaining a still larger amount as an inducement to bee men to improve the quantity and quality of the exhibits. He also thought that the bee-keeping industry could be made of sufficient importance at the State Fair to cause the Fair managers to put up a separate building for that department, when the Fair is made a permanent institution.

Adjourned to Saturday, at 10 a. m.

On Saturday morning President McCagg called the meeting to order at 9:30 o'clock. Several communications were read, and among them was one from Mr. Jerome Twitchell, of Kansas City, giving advice on shipping honey.

A model of a straw hive, made by a Hollander, was presented to the Society by the Aparian Supply Company of Wilton, Iowa.

Those who had articles on exhibition were each given five minutes to describe them.

Mr. Nagle then asked if bees are short of stores at this time of the year, what is best to feed them?

Mr. Wadsworth said he always kept a few full frames of honey for that purpose, and when a warm day came, he took out an empty frame and put in the full one.

Mr. Nagle thinks it is best not to disturb bees in the winter.

Mr. Gast thinks that feeding rock candy is good.

Mr. Younkin says he feeds taffy made of honey stirred in with powdered sugar pretty stiff, and put it on the top of the frames.

The members then went in a body to the Academy of Sciences, as per invitation, when the little straw hive before mentioned, was presented to the Academy of Sciences by the association; Mr. E. L. Briggs making the presentation address. Mr. H. C. Fulton, President of the Academy, replied in a few well-selected words of welcome and thanks. Mr. T. G.

Newman, being called on, made a few appropriate remarks. Mr. E. L. Briggs said that he would present to the Academy a model hive, with all the modern improvements, to put with the more-ancient straw hive, and show by contrast the advancement made in apiculture.

Adjourned to 2 p. m.

The afternoon session was called to order at 2 p. m. by President McCagg. The minutes of the former meetings were read and approved.

Mr. Kimball said he thought some of the most important things have been overlooked, such as introducing queens, fertile workers and foul brood. One of the members has foul brood in his apiary. I would like to know the cure and preventive.

Mr. Goos said, burn the hive.

Mr. Briggs said, it was probably brought about by introducing a queen or buying a nucleus, and unless something is done it will spread; the only way to cure it is to burn the hives and contents. It can be cured, but only with the greatest of care.

Mr. Kimball said that some one had shipped bees here that had it.

Mr. Carpenter: Some persons told me not to say that we had foul brood. We have our bees in a clamp, and they cannot get out; if they have it, I shall burn every one.

Pres. McCagg: Has your neighbor the same opinion of foul brood that you have?

Mr. Carpenter: Yes, sir; he says he will burn every one. Some bees were sent here from Illinois, four years ago, that had foul brood, but they were cured.

Mr. Briggs thought it was handed down from them.

Mr. Gast: I was in Clinton 16 years ago, and saw foul brood there, and it was spreading about Lyon, and even across the river, to Fulton. The cell is somewhat sunken with a small hole in the centre; you can tell it by the smell.

Mr. Nagle: I would like to say that our committee have been invited to hold their meeting at the Academy of Sciences, and if we send flowers or birds they can be identified there.

It was decided to hold all meetings between now and the next annual meeting at the Academy.

According to the programme, Mr. T. G. Newman then gave a lecture for an hour, on the necessity for providing bee pasturage. He described the advancement of the art of bee-keeping from its earliest date, and said that the unfolding of each invention was the result of the necessity for its existence. The woodman's axe had felled the trees, and the march of civilization had destroyed the wild flowers, from which the bees formerly gathered their stores—now it became a necessity that bee-keepers must supply the want, and provide pasturage for the bees, if they would have the best results. This subject was of immense importance, because if we failed to provide the bloom, the bees could not gather the honey, and the golden dollars would not glide into the pockets of bee-keepers, by the sale of that sweet article of commerce.

Rev. E. L. Briggs: If any one sets out shade trees, let them set out basswood or linden. Nature gives us a succession of bloom; first there is the willow, then the plum, peach, cherry, apple, gooseberry and raspberry, keeping the bees always busy enough to keep up breeding and have the hive full of young bees in time for the great honey flow in June from white clover. Young bees never fly until they are 16 days of age, and they will be ready just in time for this great honey flow, lasting about four weeks; then comes the linden, after that a vacancy in the honey flow comes in the right time, as the brood has been pretty well crowded out, and now the queen will fill every corner with brood for the young bees, for the fall flow of honey. Now comes the fall flow from heart's-ease, smartweed, goldenrod and catnip. I should sow seed, as Mr. Newman suggests, but not depend upon it alone. I just arose to supplement what Mr. Newman said. Mr. Muth, of Cincinnati, has his apiary on his house-top, and depends on Nature for his supply in the midst of that large city.

The Statistical Report for 1883 of the members of the association, was announced as follows: 1,703 colonies in the spring; 2,669 colonies in the fall; these produced 38,385 pounds of comb honey; 29,515 pounds of extracted honey, and 546 pounds of wax; 13 wintered their bees in cellars; 7 in bee houses, and 23 on the summer stands; 32 reported the bees in good condition, 4 fair, and 2 poor.

Mr. Moore: Do chickens eat bees?

Mr. Carpenter: Chickens eat drones; they catch them on the fly.

Mr. Nagle: Do they never catch other bees?

Mr. Carpenter: I have watched them, and have never seen them catch worker bees.

Mr. Briggs: If he has such chickens, I would like to buy some of them.

Mr. Nagle and Rev. E. L. Briggs explained their methods of rearing queens.

On motion the time for holding the next annual meeting was fixed for the third Wednesday and Thursday in February, 1885.

Mr. Newman suggested that the fact that reduced fares may be obtained, be incorporated into the notice for the next meeting.

On motion the convention adjourned till the third Wednesday in February, 1885.

Wm. Goos, Sec.

For the American Bee Journal.

Specimens of Foul Brood.

T. J. BURRILL.

I notice Mr. Stewart's criticism on page 167, upon sending specimens of suspected comb through the mails. The points are well taken, and should be well heeded. My requests were not sufficiently guarded—indeed, I did not at the time think of the possible infection of a healthy colony through the mails. While the chance must be considered a remote one, and may be altogether avoided by proper wrapping, still men are not always prudent

and careful, and as the matter is important, all ought to agree with Mr. Stewart. Please do not send me any more specimens in this way; perhaps it is better not to send any more in any way. I have enough of the genuine stuff on hand now to start any number of cultures.

The main point to determine by a large number of specimens is whether or not what bee-keepers call foul brood is always the same thing, and, if not, to ascertain reliable characteristics of the different diseases. Of the considerable number of packages received, all save one were clearly of the same nature. Two said to be a mild form of foul brood, contained the same microscopic organism found in malignant cases, and I have no doubt would upon inoculation of a healthy colony produce the same effect. But this latter might not prove true, because it is now known that some of these minute parasites or "disease germs" differ in their physiological effects while the appearance remains without change. Their virulence is modified, somewhat as cultivation changes the poisonous properties of certain flowering plants. This is a most proper subject for investigation, yet it cannot be done without material of all kinds and forms of the disease.

As spring approaches I find myself face to face with another serious impediment to a complete study of this dreaded scourge of the apiary. Manifestly an investigation to be practically valuable must include direct experiments on the bees themselves, including, of course, the young from the egg onward. Mr. Heddon queries (on page 164) whether ten miles is not a proper distance apart for apiaries. Suppose my experimental bees fly the distance thus suggested, and suppose the disease be distributed by the successive visits to flowers, what a pretty "kettle of fish" I should soon have on hand!

It is true that many think they know that foul brood is not conveyed from colony to colony by such means, but it seems certain that no one does know. To prove or disprove such points is the object of an investigation. I find it feasible to cultivate successfully the organism (*Bacillus*) in meat broth in little glass flasks stopped with sterilized cotton-wool. From a minute speck of the material in a diseased comb any quantity can be furnished by the aid of these flasks, and microscopical examination can be made at any time, and as often as desired without introducing other organisms from the air or otherwise.

In this way the life history of the "disease germ" can be made out—its method and rapidity of propagation, the effects of stated temperatures, of disinfectants, etc. So far there is no trouble, but how can we be sure that growth and development in meat broth is the same as in the brood of bees? Is it feasible to keep a sufficient number of bees shut up with brood comb to try results?

Champaign, Ill.

We now club the *British Bee Journal* and our Monthly for \$2.50.

Convention Notices.

We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization.

L. R. JACKSON.

Urmeyville, Ind., Feb. 26, 1884.

The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest, for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twichell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."

C. M. CRANDALL, Sec.
Independence, Mo.

H. SCOVELL, Pres. Columbus, Kans.

The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

Wm. R. HOWARD, Sec.
Kingston, Tex., Jan. 16, 1884.

The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.

O. J. TERRELL, Sec.
North Ridgeville, O.

The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyahoga County, O. All interested are invited.

J. R. REED, Sec.

The Union Bee-Keepers' Association of Western Iowa, will meet at the Emmett house, in Dexter, on Saturday, March 29, at 10 a. m. sharp. All who are interested in apiculture are invited to attend.

M. E. DARBY, Sec.
W. B. KENYON, Pres.

The next meeting of the Bee-Keepers' Association of Central Illinois, will be held in the office of the County surveyor, in Bloomington, on Wednesday April 9.

W. B. LAWRENCE, Sec.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Why did they Die?

I bought 15 colonies of bees in December, which are in a cellar where water will freeze, in cold weather; 14 colonies are apparently in good condition; the 15th having died from some cause unknown to me. I send some dead bees and honey, also a piece of the frame and empty comb. Please give me your opinion of them, and what to do with the rest, through the Weekly BEE JOURNAL.

CHARLES GARVEY
Hammondville, N. Y.

ANSWER.—Your colony of bees is afflicted with what is known as bee diarrhoea, dysentery or cholera. We think it is caused by eating improper food. It is not contagious, and regarding your other colonies, I know of no advice to give, better than to say set them out for a flight as soon as the weather is suitable. The worst time for realizing the havoc of this disease is yet before you.

Entrance to Sections over the Frames

1. Will Mr. Heddon please tell us in "What and How" whether the strips in his honey-board come directly over the top-bar of the frames, below or over the spaces between the frames?

2. Does the entrance to the honey boxes match the entrance in honey-board, or do they come directly over the strips of honey-board?

3. Would the queen be more liable to find her way to the surplus boxes if the entrance to them matched the spaces between the honey-board and frames below, than she would if otherwise?

4. Are the bees more liable to build bits of comb between the frames and honey-board, if the spaces match, than they would if otherwise?

5. Will the bees find their way to the honey boxes as soon if the entrances to them did not match the spaces below? A. J. FISHER.
East Liverpool, O., March 8, 1884.

ANSWERS.—1. The slats in the honey board which are $1\frac{1}{2}$ inches, are so placed that their centers come directly over the spaces between the top-bars of the brood frames below, while the center of the top-bars of the brood frames come directly under the spaces between the slats of the honey board.

2. There is no regularity regarding the matching or mismatching between the spaces in the honey board, and between the bottoms of the sections. This cannot well be, when using different widths of sections, nor with any width, unless as narrow as the room occupied by each brood frame. I find, however, that with our $1\frac{1}{2}$ and $1\frac{3}{4}$ sections, the honey board breaks

the joints between the sections, almost completely. This, however, is not of so much moment, as nearly all the brace combs are built between the honey board and brood frames, and not between the honey board and sections.

3. Yes.

4. Last year we had some hives so arranged that the spaces between the brood frame and honey board matched, and we were seriously troubled with bits of comb between the bottoms of the sections and honey board.

5. You will notice that with our style of honey board, if we put the cases on the hive without any honey board, proper bee spaces are still preserved. For the past 2 years we failed to make enough boards, and so worked about half of our colonies without them. We experienced much more trouble with brace comb, and daubing, but no more surplus honey, or greater tendency to enter the sections where the honey board is not used.

A Query.

Why does not honey run out of the cells when placed there by the bees, being at the same time thin and not capped?

SUBSCRIBER.

ANSWER.—Because it is held in place by the law of capillary attraction. Perhaps thin honey would not be as likely to run out as thick. It would shake out more readily, or obey any immediate command, but you know how a drop of water will hang to the underside of a board, and how a drop of honey would slowly but surely drizzle down.



Bees All Right Yet.

My bees are all right, as far as I know. They have been shut in by the cold for the last 3 weeks. I lost one from starvation. I presume it was robbed last fall. My brick hives seem to do well this winter, and it was a hard one—last week 6° below zero; to-day the snow is 4 inches deep—hard bee weather. My bees were very heavy last fall. I have 24 colonies in the yard now. ABE HOKE.
Union City, Ind., March 10, 1884.

Alsike Clover.

In answer to G. W. Morris' question in regard to Alsike clover, I would say that I have cultivated it for many years, and would advise Mr. Morris to sow it and furnish seed for his neighbors, if they will sow it. I have never known it to fail in honey, when the white furnished but little. I have known my bees to get honey from Alsike when they never visited the white. Alsike makes the best of hay, is good for pasture, sweeter and better than any of the clovers,

and is an excellent fertilizer. Has any one ever seen a case of dysentery in the far Southern States? As to the prolificness of queens, what Mr. Doolittle would cherish in his section, Mr. Benton would discard in his. There is nothing strange in this. Mr. Doolittle says: "Here we have but six weeks during the whole season in which the bees make any gain in honey;" and, of course, he wants plenty of workers to gather honey during that time. Here we have from May 10 (if the season is favorable) till Aug. 1, and from the last of August till frost. What kind of queen would Mr. Doolittle want for such a locality? We have an occasional failure in the fall, but Alsike has never missed yet. This season my bees will have 46 acres of Alsike, and by early pasturing with cattle and hogs, it will bloom till the last of August. My observation is, that what is good in one locality will be so only in sections where season, honey flow, pasturage and climate are the same. Let all give facts as existing in their localities; this will benefit many readers.

C. W. SAPPENFIELD.
Crawfordsville, Ind.

Wintered Successfully for 11 Years.

My bees have wintered safely. This now makes 11 successive years without a loss of a single colony, except a few from queenlessness.

H. H. FLICK.
Lavansville, Pa., March 7, 1884.

Bees in Georgia.

Our winter has been unusually cold, though bees have wintered well; and are now busy working on plum and peach bloom, and building up radidly. It is to be hoped that bee-keepers will reap a bountiful honey crop this year.

J. P. H. BROWN.
Augusta, Ga., March 11, 1884.

Bees Still Confined to the Hives.

Bees are still confined to the hives. There has not been a day since last November that has been warm enough for them to fly. I think they are wintering very well, though this I only guess at.

HENRY ALLEY.
Wenham, Mass., March 13, 1884.

Building up a Home Trade.

Bees, so far, are wintering pretty well considering the fact that we have had a very steady cold winter. Mine have only had two flights since Dec. 15, 1883. I have, up to this date, lost 3 out of 44 on the summer stands. I have had a good honey trade this winter, and I am doing all I can to build up a home trade in extracted honey. I have succeeded in getting our Fair managers to enlarge their premium list for next Fair. W. H. GRAVES.
Duncan, Ill., March 7, 1884.

[Building up a home trade is the most desirable thing to do. It not only consumes more honey, but gives the producer better prices.—ED.]

Bees Doing Well.

On Feb. 2 all the bees in Northern Ohio had a splendid flight, and are in the best condition possible. I have 21 colonies packed in buckwheat chaff; they have had no flight since Nov. 5 until Feb. 2. The weather is and has been very cold; often as low as 20° below zero. I have made inquiries of men who own an aggregate of 300 colonies, and have found but 4 dead colonies. Success to the BEE JOURNAL; it comes to hand chock-full of news, and as regular as a clock.

W. S. BAIR.
Bollersville, O., March 7, 1884.

[The Weekly BEE JOURNAL ought to be regularly received everywhere, for we never vary an hour in getting all of them into the mails at 4 p.m., every Tuesday.—ED.]

Not Progressive.

I have had bees for thirty or more years. I now have 70 odd colonies, all in "King" hives. Excepting 2 or 3 years I have obtained annually from 1,500 to 2,000 lbs. of comb honey in boxes weighing, when full, 20 lbs. net. Last year I had some larger boxes holding 25 lbs. I have been in the habit of shipping to my commission merchant in St. Louis, who generally obtained very fair prices, 12 and 18 cents per pound, with no loss, damage or trouble, for 2½ per cent. commission, and returns made quickly. This I considered doing pretty well, as I never had any more trouble with bees than to put them in hives as they swarmed; and two weeks afterward putting on boxes, and just before the first box was finished, raising it up and placing an empty one at the bottom. I rarely get more than two boxes from one colony. Have lost upon an average 3 to 4 colonies yearly from the moth; never any from outdoor wintering. Judging from the present weight of my hives, they now have stores sufficient to carry them through another winter. I never saw more than three queens; never gave a new queen to a colony; never knew of a colony being queenless; never tried to prevent swarming; and the wonderful stories I read of about manipulating bees and honey, confuse me. I cannot tell where or how to begin.

A. M. CURL.
Waverly, Mo., March 11, 1884.

Bees in Arkansas.

We are having the greatest overflow here since 1884, so say some of the old folks. I put my bees on a ridge that I never saw under water since I have lived in this country (which is about 14 or 15 years), and now the water is 2 feet deep under some of the hives. As soon as the water began to come upon the ridge, I raised the hives between 2½ and 3 feet, and so far I have lost only a few that fell into the water. The bees were working finely until a few days ago; the weather became cold, and with it a heavy rain fell. For near two weeks now they have not been able to

do anything. When I want to see how they are getting along, I get into my skiff and rap on each, and it is answered by their buzz; sometimes, if I give a second rap, the guards will come to the entrance to see what is wanted. They were wintered on the summer stands, and out of 125 colonies I have lost 4 or 5, and I think they were robbed. I was away from home one warm day, and on returning late in the afternoon, the robbers' voices were the first thing I heard. On going to them, I found they had cleaned out two weak colonies. The maples, elms and peach trees were in bloom some 2 or 3 weeks ago, but we have had cold wet weather most of the time, and the bees have had but little chance at them. We hope the water will go down in a few days, and then the bees can come out in full force.

CHAS. H. KINCADE.
Sterling, Ark., March 7, 1884.

Educate the Customers.

Mr. S. Smith, on page 154, expresses my sentiments exactly. I have had the same question asked me probably over 100 times. When I would explain it to a customer and show him the extractor, how it worked, and all about it, I had no trouble to sell him extracted honey; but just so sure as it is offered in a locality where it is not known, they will raise the cry of "adulteration," glucose-sugar, etc. The uninitiated think, of course, it should sell for more than comb honey; they do not know the why and wherefore; so we must teach them. You, Mr. Editor, offer to help us out, in your foot note, and want to know who will take them? I can make good use of about 500, at the price you offer.

E. J. SCOFIELD.
Hanover, Wis., March 10, 1884.

[The responses have been sufficient for us to announce positively that the Leaflet of two pages will be issued at once, so that orders may be sent in at any time. The prices will be: 200 copies for a dollar; 500 for \$2.25; 1,000 for \$4.00. When 200 or more are ordered at one time, we will print the honey-producer's name and address free, at the bottom. Less than 200 will have a blank in which the name and address can be written. All by mail, post-paid, at the prices named.

Leaflet No. 1 is entitled, "Why Eat Honey?" It describes what pure honey is—explains how the bees place the comb in the sections—how pure honey is extracted from the comb, and why it can be sold at a less price than comb honey—shows the difference between "strained" and "extracted" honey—and explains the cause of candying, and how to liquefy it, etc. It is illustrated with a honey extractor, a section of comb honey and a pail of extracted honey. Samples are sent to all who have responded to our query—"Who will take them?"—ED.]

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a.m., March 17, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 10c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B. THURBER & CO.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect and are made of 1 lb. sections of 15@20c., 11@12 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@32c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Receipts of comb honey quite liberal, and prices lower. Choice white 1 and 2 lb. sections, 16@17c., with probability of still lower prices. Dark and irregular combs, 10@12c., and slow sale at that. Extracted dull at 8@10c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Reports from the bee districts are to the effect that the prospect is excellent for a heavy yield, the only disc-ouraging news being the loss of a good many bees which were located in the bottoms of canyons, and were washed away by the freshets. Market is inactive. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady demand and supply both ways. Comb, 12@16c per lb., and strained and extracted 8@10c.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18c.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

BEESWAX—in great demand, but no supply; nominally 30c. per lb.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, Sec.

The Western Michigan bee-keepers, will hold their spring meeting at Berlin, on April 24.

F. S. COVEY, Sec.

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a continual statement of account.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and \$6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with \$10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 25
" 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

To give away a copy of "Honey as Food and Medicine" to *every one who buys a package of honey*, will sell almost any quantity of it.

Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for \$3, or in paper covers for \$2.75. The Monthly BEE JOURNAL and the book, \$1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is \$1.50 bound in paper covers, or \$2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Italian Bees and Queens For Sale.

Tested Queens, May, \$3.00; June, \$2.50; after July 1, \$2.00 each. Untested, after June 1, \$1.00; 6 for \$5.40. Full colonies in May, \$7.00; 2 for \$13.00; 10 for \$60.00. After June 1, \$1.00 less each colony. Satisfaction guaranteed. I. S. CROWFOOT, 12A2t Hartford, Wis., April 1, 1884.

HELP WANTED,

To handle Bees this season. Address, with terms, etc., E. DRANE, EMINENCE, Henry Co. Ky. 12A2t

ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y. 11A2t

WANTED—A mechanic to assist in apiculture. Wages according to knowledge of both industries. Reference exchanged. Call at this office, or address R. J. ADAMS, Lakeport P. O., Chicot Co. Ark. March 3, 1884. 11A2t

The Bee-Keepers' Guide;

Or, MANUAL OF THE APIARY.

10,000 SOLD SINCE 1876.

11th Thousand Just Out!

10th Thousand Sold in Just Four Months!

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, \$1.25. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
47D107 18C7t LANSING, MICH.

AGENTS

wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
4Aly

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DR. FOOTE'S HAND BOOK OF HEALTH,

HINTS AND READY RECIPES.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat, How to Eat it, Things to Do, Things to Avoid, Perils of Summer, How to Breathe, Overheating Houses, Ventilation, Influence of Plants, Occupation for Invalids, Superfluous Hair, Restoring the Drowned, Preventing Near-Sightedness, Parasites of the Skin, Bathing—Best way, Lung & Lung Diseases, How to Avoid them, Clothing—what to Wear, How much to Wear, Contagious Diseases, How to Avoid them, Exercise, Care of Teeth, After-Dinner Naps, Headache, cause & cure, Malaria: Affections, Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhoea, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Fevers, Fetal Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sunstroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid, by THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO., HOOPSTON, ILL.

1ABtf

GOLD for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time, or in your spare time only. The work is universal, adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4Aly

BASSWOOD, MAPLE AND ELM TREES, 2 ft. and under, \$2 per 100; 2 to 6 ft., \$6 per 100; 6 to 10 ft., 10c. each. N. E. DOANE, Pipestone, Mich.
11Dtf

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.

MRS. FRANCES DUNHAM, De Pere, Wis.
Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.

Yours,

CHAS. DADANT & SON.

Beebe, Ont., Dec. 10, 1883.
Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it.

Yours very truly,

D. A. JONES.

MRS. FRANCES DUNHAM:

All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.

Yours respectfully,

J. G. WHITTEN.

MRS. FRANCES DUNHAM:

After using one of your foundation mills for the past 3 years, we can't say too much in its favor. And for brood foundation, it stands head and shoulders above all.

Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM:

I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretschmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is me always a jewel. You are at liberty to publish this. Your truly, T. L. VONDORN.

Send for description and Price List to

2Btf 6D6t



FRANCES DUNHAM, De Pere, Wis.

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all. JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

Bees for Sale!

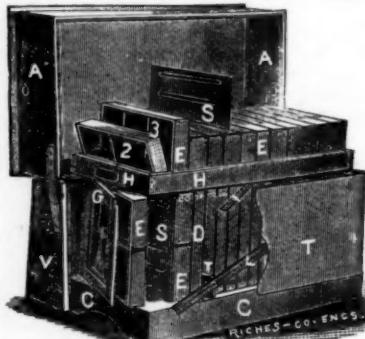
One hundred Colonies in Langstroth's Improved two-story Hives, made of good Poplar Lumber, "planed," 10 full frames each, in good condition. Will sell in quantities to suit purchasers. Hives on order on cars. For further particulars apply to or address,

J. W. HOWELL, Kenton, Tenn.

11A2t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, ELVIN ARMSTRONG, Prop'r. of the Crown Bee Hive Factory and Apiary, JERSEYVILLE, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Italian Bees and Queens For Sale!

Send 25 cents (one cent stamps) and get our Book on BEE-KEEPING.

Address E. P. BAKER, DES MOINES, IOWA.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for BUSINESS and BEAUTY. Dunham and Vandervort FOUNDATION a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,

12A8t 4B4t

AUGUSTA, GA.

ALLEY'S Drone Excluder, Queen & Drone Trap COMBINED.

Sample, by mail, 65c.; by express, 50c. In the flat, per dozen, including one made for model (13 in all) \$3.00. Send for our 23d annual Circular and Price List of Queens and four races of Bees.

Bee-Keepers' Handy Book, bound in cloth, by mail, \$1.00.

HENRY ALLEY,
9Atf
WENHAM, Essex Co. MASS.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
32A Btf J. VANDERVORT, Lacyville, Pa.

BEE KEEPERS, before ordering your APIARIAN SUPPLIES

Send for our large Illustrated Catalogue, sent free to any address.

10A24t E. KRETCHMER, Coburg, Iowa.

FOR SALE CHEAP. BEES! BEES!

Having more Bees than I can well handle, I wish to sell 100 Colonies immediately. I use L hives.

12A2t E. DRANE, EMINENCE, Henry Co. KY.

SEND YOUR NAME AND ADDRESS FOR MY
20-page Price List of Italian, Cyprian and Holy
Land Colonies, Nuclei, Queens and Apriarian Sup-
plies. H. H. BROWN, Light Street, Col. Co. Pa.
12D4t 4B1t

1868. 1884.
**HEDDON'S
COLUMN.**



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: $4\frac{1}{4} \times 4\frac{1}{4} \times 6\frac{7}{8}$ and 8 to the foot, per 1,000, \$6.50; $5 \times 6 \times 2$, per 1,000, \$8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

BEE-KEEPERS' SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax, the price of comb foundation is now advanced 3 cents per pound above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay 32c. per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS!

The present prices are as follows:

White Clover, \$15.00 per bushel, \$4.00 per peck, or 30 cts. per pound.

Alsike Clover, \$12.00 per bushel, \$3.25 per peck, or 25 cts. per pound.

Sweet Clover, \$10.00 per bushel, \$2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE**For Brood Frames.**

One ounce spools, each, - 4 cents.
Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents.
Postage, 13 cents extra.

One pound spools, each, 40 cents.
Postage 18 cents extra.

One pound will wire about 175 frames.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, \$25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

928 West Madison Street,

CHICAGO, - - - ILLINOIS.

American Linden or Basswood FOR BEES!

5 to 10 inches, per 100 \$1.50.
3 to 5 feet, per 100 7.00.
For sale by **Z. K. JEWETT**, SPARTA, WIS.
12A6t 4B2t

REDUCED PRICES!

All one-pieced Boxes and 4-pieced, $4\frac{1}{4} \times 4\frac{1}{4}$, per 1,000, \$4.25; $5\frac{1}{4} \times 6\frac{1}{4}$, per 1,000, \$4.75. And Hives proportionally cheap. Send 5 cents for sample and special Price List.

J. P. McGREGOR,
10D2t 4B1t FREELAND, Saginaw Co. MICH.

Bees! Queens! Nuclei!**INSTRUCTION IN BEE-KEEPING.**

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Galloping Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, \$9.00; 10 or more colonies, \$8.00 each.

QUEENS.—I breed Queens by the best methods, and from the best stock. Queens ready after May 20th. Untested, \$1.00; tested, \$2.00; selected tested, \$3.00.

NUCLEI, with untested Queen, \$3.50; with tested Queen, \$4.50; with selected tested Queen, \$5.50.

INSTRUCTION—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address,

O. CLUTE,
10D1f IOWA CITY, IOWA.

Pure Italian Bees and Queens!

Send for Price List to
A. B. MILLER, Wakarusa, Elkhart Co., Ind.
7D6t

Bees For Sale!

Thirty colonies at \$5.00 each, in lower Langstroth hives, in order on cars.

9D3t Dr. WM. M. ROGERS, Shelbyville, Ky.

BE SURE

To send a Postal Card for our Illustrated Catalogue of APIARIAL SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

J. C. SAYLES,
51D15t 1B5t HARTFORD, WIS.

HEDDON HONEY CASE,

Ready to nail, per 100, \$15.00. Hives

cheap and good. **N. E. DODGE**, PIPESTONE, Pipestone, Berrien Co. MICH.

SMITH & SMITH

Wants to give away 5,000 of their Illustrated Catalogues and Price List of Bee-keepers' Supplies. Special Attention given to the

Simplicity One-Piece Section.

Also Hives, Smokers, Foundation, etc.

SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1 Lock box 995, Belleville, St. Clair Co., Ills.

ITALIAN BEES AND QUEENS.

Send for Price List to

D. B. BROWN, DES MOINES, IOWA.

10D7t

BEE HIVES!

Simplicity, Langstroth and Chaff Hives, Section Boxes, Brood Frames, and Comb Foundation. Send for Price List. The successors of A. B. Miller & Son.

MILLER BROS.,
51D6t NAPPANEE, Elkhart County, IND.



All Bee-keepers wanting HIVES OR SECTIONS of any kind, and in any quantity, will confer a favor by sending for my Price List (Price List Free). Direct

CHAMPION BEE HIVE MANUFACTORY.

R. L. SHOEMAKER, Proprietor.

Newcomerstown, Tuscarawas Co. Ohio.



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Territory given. Agents Wanted. Protection guaranteed. Catalogues free to any address. Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street, 203 N. Fifth Street,
CHICAGO. ST. LOUIS.

Estey,
Story & Camp.

The largest exclusively
Piano and Organ house
on the Continent.

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, DR. G. L. TINKER,
44Atf NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

\$66 a week at home. \$5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine. 4A1Y

FLAT - BOTTOM COMB FOUNDATION.

high side-walls, 4 to 16 square feet to the pound. Circular and samples free
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & CO., Augusta, Maine. 4A1Y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets, Langstroth Bee Hives, Honey Sections, etc.

Apply to C. F. MUTH,
976 and 978 Central Ave., CINCINNATI, O.

Send 10c for Practical Hints to Bee-Keepers.

HELLO! HELLO!

We are now ready to Book Orders for
Bee-Keepers' Supplies.

White Poplar
Dovetailed
SECTIONS A
Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

7A6m APIARIAN SUPPLY CO., WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale
and retail. See Advertisement in another column.

J. W. ECKMAN,
DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

EARLY CHOICE QUEENS

TO BREED FROM,
From April 20th to June 1st. Prices upon application.
10A3t HENRY ALLEY,
WENHAM, Essex Co. MASS.

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed
Sections, Smokers, etc. Send for Price List.
7A13t H. C. WHITE, MADISON, IND.